FIVES: An Integrated Strategy for Comprehension and Vocabulary Learning

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This article describes a strategy that emphasizes the integration of all language and literacy skills for learning across content areas as well as the importance CCSS place on learners' ability to ask questions about information, phenomena, or ideas encountered (Ciardiello, 2012/2013). FIVES is a strategy that meaningfully integrates research-based methodologies associated with reading, writing, speaking, listening, viewing, and visually representing for differentiated disciplinary literacy instruction related to authentic texts and issues. The strategy described can be universally applied across disciplines to develop high levels of competence with literacy processes and content.

Preparing students for their future in an increasingly global society requires teaching them how to construct personal meaning (i.e., knowledge they can apply to reason, learn, analyze, evaluate, communicate, and be comfortably flexible). Competency in higher-level cognitive functions grows incrementally when taught, modeled, nurtured, and practiced with relevant and authentic applications. Meeting this challenge is essential if students are to be prepared for a 21st century global community — intellectually, economically, and politically. Such curricular goals align with CCSS for college and career readiness that focus on broad, meaningful performances that are language and domain specific (Shea & Roberts, 2016).

The Common Core State Standards (CCSS) outline rigorous expectations (CCSSO & NGA, 2010; NAP, 2011) for learning and academic performance. Students are expected to read increasingly more complex text, particularly more in the informational category, and write with knowledge, voice, and clarity across a range of genres. Although there is debate on the way CCSS have been implemented, the broad goals and expected outcomes stated in them are competencies students will need for academic and career success — and as life skills (Shea & Roberts, 2016).

Grade Span Literary Informational (CCSS)

Grade	Type of text	
	Literary	Informational
K-4	50%	50%
5-8	45%	55%
9-12	30%	70%

(NAEP, 2008)

CCSS (2012) define informational texts as writing with content specific to subject domains (e.g., history, science, technical texts that can include directions, forms, charts, diagrams, and digital sources on a myriad of topics); it includes biographies and autobiographies. Literary nonfiction or writing that narrates an investigation (i.e., memoirs, personal essays, commentaries and magazine feature articles) also comes under this category (Bradway & Hesse, 2009). This shift necessitates differentiated *disciplinary* literacy instruction (i.e., with a focus on content in subject areas) if teachers are to address the range of ELA and domain standards in their instruction and provide all students with opportunities to practice and learn content across subject areas (Subban, 2006; Shanahan & Shanahan, 2008; Tomlinson, 2001). Literacy skills, developed in primary and elementary grades, do not automatically transfer to applications with more sophisticated texts met at secondary levels; literacy instruction must be ongoing, focused on developing the skills needed to decipher more complex texts and tasks at each grade level (Shanahan & Shanahan, 2008) — making all teachers, teachers of English (Fader, 1969). In reading, CCSS call for students to read widely and deeply — and reread as needed to...

- comprehend the author's message,
- construct meaning with text,
- cite text evidence as rationale for their thinking,
- identify key ideas and significant details.
- analyze sophisticated and technical vocabulary for contextual meaning,
- identify the author's point of view, bias, opinions, or purpose,
- attend to and use visual supports in text, and
- effectively use text structures to support comprehension (CCSSO & NGA, 2010).

Furthermore, strategies for successful performance of strategies for learning needs to be taught, reinforced, and consistently practiced across all disciplines if outcome competencies are to become internalized as habits of mind.

Goals for writing focus on using writing to learn — to express and communicate ideas. Students integrate writing with reading tasks to share their thinking, knowing, and learning. They...

- compose clear, coherent, and organized writing focused on the task, purpose, and audience,
- conduct short research projects that build knowledge through investigation,
- draw evidence from texts to support responses, and
- use technology and digital tools to research information, compose, publish, and collaborate with others (CCSSO & NGA, 2010). CCSS further delineate a balance of purposes for writing (National Assessment Governing Board, 2007).

Purposes for Writing			
Grade	To persuade	To explain	To convey meaning
4	30%	35%	35%
8	35%	35%	30%
12	40%	40%	20%

FIVES and the CCSS

FIVES is a strategy that emphasizes the integration of all language and literacy skills for learning across content areas as well as the importance CCSS place on learners' ability to ask questions about information, phenomena, or ideas encountered (Ciardiello, 2012/2013). FIVES meaningfully integrates research-based strategies associated with reading, writing, speaking, listening, viewing, and visually representing for differentiated *disciplinary* literacy instruction related to authentic texts and issues. The strategy can be universally applied across subject areas to develop competence with literacy processes and content specific knowledge and skills. This translates into college, career, and life skills that lead to success.

Introducing FIVES begins with a discussion on the what (content knowledge), how (procedural knowledge), and when (conditional knowledge — when to apply) associated with each component of the strategy. Most importantly, the why, purpose, or destination must be clear and made relevant from the start. FIVES support student success with the micro and macro aspects of reading comprehension and writing to learn through the integration of skills used to complete the components. As students experience increases in achievement, their self-confidence and task persistence grows (Shea & Roberts, 2016).

Micro Processes of Comprehension

The *micro* process (Irwin, 1991; 2007) includes understanding vocabulary used in a text along with chunking words (i.e., stringing together) into meaningful phrases and sentences. Readers must grasp the meaning conveyed by the words in the context in which they are used. The V in FIVES helps students notice important, interesting, complex, or unusual words in a text; they learn to think about, investigate, and/or clarify these in order to fully understand — get the gist — of the author's message. The micro aspect also requires a reader to connect sentences and paragraphs together, understand word referents used, and make mini inferences between sentences and paragraphs (Shea & Roberts, 2016).

For example, assume a student reads the following in a text: *The boy tried out his new* fishing pole in the local pond. He concluded that it was a good investment for getting the catch of the day in that spot (Shea & Roberts, 2016, p. 27).

The efficient reader understands that *he* in the second sentence refers to the boy mentioned in the first sentence and *it* represents the new fishing pole. From prior knowledge or experience this reader will need to understand that the expression 'catch of the day' means a fish, the local pond in the first sentence is meant by the phrase *in that spot* in the second sentence. Finally, the use of investment and the word conclude, leads the reader to assume that a fish was caught since the boy *concluded* that the new pole was a good *investment* (Shea, 2006). This involves F (what is explicitly stated in the text), V (word and figurative language meanings), and I (mini inferences that involve a degree of reading *between* the lines).

Macro and Metacognitive Process of Comprehension

Macro processes (Irwin 1991; 2007) help readers dig deeper for meaning — to understand the main idea, purpose, determine significant details, and central theme. This is demonstrated in students' summaries (S). Readers also elaborate in the macro phase to expand the gist as they read between and beyond the lines to make connections with their own experiences, with what they know about the world, or with other texts. They engage in higher-level thinking (Shea & Roberts, 2016). An emphasis is always on providing a rationale or grounds for one's ideas (Calkins (2000), appreciating the expectation for evidence when presenting a point of view. The macro also involves *metacognition*. Readers monitor their own understanding, recognize when meaning is lost, and apply fix-up strategies. Garner (1987)

explains that metacognition relates to "learners' knowledge and use of their own cognitive resources" (p. 1). FIVES components align with Irwin's (1991; 2007) model of micro and macro aspects of comprehension as well levels of higher order thinking.

Irwin's Five Aspects of Com	prehension (1991; 2007)		
Five Aspects of Comprehension			
Micro Processes	Chunking words into meaningful phrases (F)		
Integrative Processes	Understanding vocabulary, figurative language, and word referents $(F+V)$ Building connections between sentences and paragraphs $(F+V+I)$ Making mini inferences between sentences and paragraphs $(F+I)$		
Macro Processes	Grasping the overall gist of the text; constructing deep meaning with the text $(F + I + E + S)$		
Elaborative Processes	Organizing and summarizing (S) Connecting relevant personal experience (E) Creating mental images (F + I + E) Responding affectively (I + E) Making predictions (F + I) Integrating prior knowledge from other sources (E) Applying higher-level thinking (E)		
Metacognitive Processes	Monitoring personal understanding (FIVES) Self-initiating fix-up strategies (FIVES)		
Adapted from: Tompkins, G. 2 Merrill Prentice Hall.	2003. Literacy for the 21 st Century. Upper Saddle River, NJ:		

Components in FIVES

Each letter in FIVES represents a competency for understanding information (i.e., explicit and implicit) and vocabulary in text. They also represent construction of personal meaning through an integration of what's stated with background knowledge and experiences along with elaboration and expansion. Readers are also called upon to express (i.e., orally and/or in writing) the results of their active reading (Shea & Roberts, 2016).

F stands for facts. Before readers reach for higher levels of thinking, they must acquire facts (i.e., information) to work with — as grist for meaning making. The Fact level is expressed as a verb (i.e., remembering) rather than as a noun (i.e., knowledge) in the revised taxonomy; the

revisions recognize the cognitive processes performed at each level (Anderson, et al., 2001). It's essential that readers recall the stated facts or information accurately and identify key ideas and significant details.

Bloom's Revised Taxonomy: Bloom's Revised Taxonomy: From Fact Acquisition to Creative Synthesis (Anderson, Krathwohl, Airasian, Cruikshank, Mayer, Pintrich, Raths, & Wittrock, 2001)

Original Thinking New Thinking

Skill/Level Skill/Level

Most complex to least complex

Most complex to least complex

Evaluation Creating

Synthesis Evaluating

Analysis Analyzing

Application Applying

Comprehension Understanding

Knowledge Remembering

I stands for making inferences. Students read between the lines, integrating text content (tc) with what's in their mind (background knowledge — bk and experience —e) to infer. Thus, I = tc + (bk + e) (Shea, 2012). It's important to acknowledge that personal life circumstances, opportunities, family, and culture have formed the background knowledge and experiences that students bring to a text. Although built from this common mixture, text-based inferences are those supported with an abundance of information explicitly stated in the text; knowledge-based inferences are highly supported with the readers' background knowledge and experiences connected to the text (Beers, 2003). As readers infer, they personalize understanding (Irwin, 2007; Keene & Zimmerman, 1997).

Inference Formula

Making an Inference: I = tc + (bk + e)

Inference = what's in the book (tc) + what's in my mind (bk + e)

V is for vocabulary. "Words are important; they have power" (Shea, 2011, p. 194). Authors use precise words to make their message clear. Some words may be new or unfamiliar to readers as found in a new context. However, readers need to fully understand the words, terminology, and expressions used by authors for full comprehension (Shea & Roberts, 2016). Students who have limited vocabularies struggle to understand text with sophisticated words or terminology specific to a subject or topic. This is especially true for English Language Learners (ELLs) limited in the academic language required for navigating content area texts and instruction related to it (Kieffer & Lesaux, 2010). Informational (expository) text is especially replete with terminology that is topic specific as well as known words used in a new way. Beck, McKeown, & Kucan (2002) call these *tier 2* (sophisticated synonyms for basic or *tier 1* words) and *tier 3* (domain or content specific) words.

E stands for experiences. Readers elaborate, expand, evaluate, and make connections with information stated based on experiences (from background knowledge and life) in order to comprehend texts (heard or read) on a deep and personal level (Shea & Roberts, 2016). Meaning becomes negotiated between the author and reader.

S is for summary. Summaries reflect the accuracy, extent, and depth of readers' comprehension, their ability to identify main ideas and significant details, and the clarity with which they express (i.e., orally or in writing) ideas. Effective summaries include important ideas, set aside unimportant and redundant details, rephrase information, report information in an appropriate sequence, and construct a topic sentence when the author does not provide or explicitly state one (Irwin, 2007). All of this is done in a concise manner, capsulizing key ideas for remembering and holding them for use in higher-level thinking. It is a multilayered, complex process that requires explicit instruction, effective modeling, and authentic practice (Cohen & Cowen, 2011). Summarizing becomes an ongoing metacognitive behavior when readers selfmonitor comprehension, forming brief mental summaries as they navigate through complex text. This significantly increases retention and improves overall comprehension of any text (Gunning,

2010).

The steps of FIVES are introduced in the order of the acronym. Following the acronym creates a clear and straightforward path for students learning the strategy. However, it must be emphasized that, although one step at a time is in focus when introducing FIVES, other components of full comprehension are never ignored in the lesson. After each step has been taught, FIVES are used strategically, integratively, and differentially to meet the needs of the reader, text, and task as they pose questions or petition prompts to guide their thinking — ones modeled on those demonstrated by the teacher (Shea & Roberts, 2016).

Question prompts are posed in an interrogatory format, typically starting with interrogative pronouns (e.g., who, whom, which, what), how, when, or why and end with a question mark. They request information or explanations of thinking and expect an answer. Teachers also use *petitions*. Directives — words that specify a behavior (i.e., list, describe, outline, report, or explain) — are characteristic of petition prompts (Cole, 2009).

The prompts posed set a purpose for reading. The prompts teachers use become models of ones readers eventually set for themselves before, during and after reading. "Questions lead readers deeper into a piece" of text (Zimmerman & Hutchins, 2003, p. 73). The right prompts stimulate deep inquiry, setting the reader on a quest for information. Not all prompts stimulate the same depth of thinking; nor are they meant to. Some prompts are thick; some are thin. Prompts lead readers to surface and deeper analysis of text content. *Thin* prompts focus on information found predominantly in the text — in a single sentence or across several sentences or paragraphs; *thick* prompts stimulate deeper thinking about the information and concepts stated and implied in the text (McLaughlin & Allen, 2000; Tierney & Readence, 2000).

There is abundant evidence for a multitude of comprehension strategies presented in professional literature (Block, Gambrell, & Presley, 2002; Harvey & Goudvis, 2007; Tompkins 2010). FIVES call for an integration of strategies when reading. FIVES can be taught across grades in a school, allowing consistency in comprehension instruction regardless of the text type or content area. FIVES allows an authentic connection to meaningful writing as students use their notes taken before, during, and after reading and discussion to formulate *constructed responses* (CRs) — and even multiple paragraph *integrated response essays* (IREs) (Shea & Roberts, 2016).

Using FIVES for Writing

Writing is one of the most important skill students learn; it impacts learning, academic success, and the quality of one's life and career beyond school (Sundeen, 2015). However, surveys have found that insufficient time is scheduled for writing in many classrooms; writing strategies are taught only 6.3 % of the time and writing demonstrations noted only 5.5 % of the time. Evaluation of students' writing accounts for 4.2% of instructional time (Applebee & Langer, 2011). In addition, Sundeen (2015) reports that most of the instruction and practice related to writing are for a paragraph or two — insufficient to build, explain, and provide evidence for ideas. *Composition* involves writing a detailed, extended expression of thinking. Instruction and practice with composing continuous text that develops an idea, argument, or body of information in personal voice is essential if students are to meet CCSS (National Center for Education Statistics, 2012). Well-crafted question and petition prompts call for composition that explicates synthesized information, interpretations, connections, and conclusions on a topic researched and studied (Shea & Roberts, 2016).

After taking notes (i.e., posing prompts and responding or answering each) in FIVES format across a textbook chapter, ancillary resource, or unit of study with multiple resources, students would review, analyze, and construct a thick prompt for a *constructed response* (CR) or thicker one for a multiple paragraph *integrated response essay (IRE)* that synthesizes information across several sources. An effective prompt calls for synthesized information, reflections, interpretations, connections, and conclusions for the content as a whole (Shea & Roberts, 2016). With this preparation, students are gradually prepared for increasingly complex academic writing tasks (Gunning, 2010).

Getting ready to write an effective CR or IRE includes analyzing information gathered and organizing it into categories or topics; it also requires a consideration of audience, purpose, premise or theme, evidence to support thinking, and genre format for expression of ideas (Gunning, 2010). Writing a constructed response can be as simple as ABC when following a structure that guides writers in effectively and efficiently meeting expectations for the task. Although the format for a more involved IRE — one that synthesizes information from multiple sources — is expanded slightly from the *constructed response* (CR) paragraph, it remains as simple as ABC. The teacher models ABBC for paragraph construction and the extension of that

to ATripleBC for writing a multi paragraph, *integrated response essay* (IRE). See the anchor chart for the CR and IRE.

ABBC for Writing a Constructed Response

A *constructed response paragraph* is written to answer a question prompt or respond to a petition prompt. It should minimally contain the following structure in order to effectively express the writer's thinking and knowledge related to the prompt. If writers have another significant supporting detail, they most certainly can add it to the paragraph with an additional B.

The acronym for writers to remember is **ABBC.** It's as simple as ABC!

- **A Announce** or Introduce. Just as morning announcements in the school broadly tell what will happen during the day, the introductory sentence(s) in a constructed response paragraph broadly announces what will follow in general terms a premise meant to grab the reader's attention.
- **B Build** up. The writer elaborates and expands a first supporting detail for the premise stated in the Introduction. Cite the source of information.
- **B Build** up. The writer elaborates and expands a second supporting detail for the premise stated in the Introduction. Cite the source of information.
- C Connect back to Conclude with a Convincing statement 3 Cs. The author writes a closing sentence(s) that connects back to the premise stated in the introduction to conclude with a strong, convincing statement.

Transition words, effectively selected, guide the reader smoothly, sentence-to-sentence, across the paragraph. Teaching and modeling how to decide which transition word to use where and when is essential. It's an important component in the craftsmanship of good writing.

Shea & Roberts (2016). *The FIVES strategy for reading comprehension*. West Palm Beach, FL: Learning Sciences International.

ATripleBC for writing the IRE — also as simple as ABC

Keep it clear and show what you know.	ABBC Paragraphs A) Tell them what you are going to tell them. B) Tell about a supporting detail B) Tell about another supporting detail C) Tell them what you told them. Remember to use good transition words to pull the reader along.
A Announce (write) your <i>main idea or thesis</i> statement in a sentence. Introduce the premise/topic in an ABBC paragraph.	Always write a central idea sentence first. This sentence will help keep your paragraph focused on the topic. Example: Making choices is a central theme in or Earthquakes have caused damage in many parts of
Triple B Build it up Use specific examples and details to support your main idea. B B Build three categories of support with three ABBC paragraphs.	Examples of sentence starters for Triple B with transition words and phrases. 1. One example is 2. Researchers have concluded 3. According to multiple sources 4. Another reason 5. First 6. Then 7. Next 8. Lastly
C Comments/Connections/Conclude Make a statement about how your example supports your main idea. Conclude with a strong, convincing ABBC paragraph that connects to the Introduction's premise.	Examples of sentence starters for C 1. It can be concluded that 2. This shows that 3. The totality of this information supports 4. These examples demonstrate 5. The evidence described appears

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Conclusion

When literacy strategy instruction is effective, students become self-sustaining in applying the strategy to learn in and out of school. They not only have a wealth of useful tools, they know how to select the best one for the task at hand and how to wield it purposefully. FIVES becomes that tool for making sense of all kinds of texts. It is also an efficient and user-friendly tool that all students can use effectively. FIVES integrates multiple practices supported with research; it allows for *disciplinary* literacy instruction (i.e., literacy instruction with subject area content) that's differentiated to meets all students' needs. Success with FIVES is measured in the achievement of students who use it as a personal tool for learning.

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